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still alive and trying to suck a bit of apple paring. I then offered it some sugar and water on which it fed greedily, but the solution being too strong stuck to its feet and in struggling it lost two of them. On the 30th the last fly came out a female, and then I determined to try how long I could keep her, making my sweetened water very weak. The first mentioned died on the 15th November, and the last on the 10th December being then forty days old, and I think might have lived longer but that in the mean time I had filled up my case with plants and as she persisted in keeping near the glass her wings were continually drenched by the moisture collected on it.—Louis Mitchell, Norwich.

AMERICAN LEECHES.—Our fresh water leeches, neglected for so long, have at length received attention from Prof. Verrill, who contributes an illustrated article on them to the "American Journal of Science" for February. About twenty-five species are enumerated, most of them being new to science, one species (Cystobranchus viridus Verrill) lives in both fresh and salt water. Most of our common leeches belong to Clepsine, and are found under submerged sticks, etc. and occasionally on the under side of turtles, but they seldom, if ever suck blood. They feed upon insect larvæ, small worms, etc.

GEOLOGY.

A NEW CAVE IN BERKS COUNTY, PENNSYLVANIA, Was discovered sometime last November and was explored to some extent in February 1872. The above cave is now explored to the length of about five hundred feet and in width nearly three hundred feet in several apartments composed of limestone and silicious rock. The stalactites and stalagmites are of a beautiful nature, some stalactites are nearly pure silica, some twelve to fourteen inches in length and one and one-half inches in thickness, and in one apartment all quartz crystals, some purple, are as near Amethyst as can be. I intend to explore the whole and expect to find a "bone cave below, as the present floor, I am sure, at one time dropped down and is now from twenty to twenty-five feet in depth. I expect to find an entrance to the lower bottom. The temperature of the cave is from sixty to sixty-five degrees F. in some apartments. I think the stalactites are purer and finer than in the Mammoth Cave of Kentucky. The above cave is now

leased by Samuel Kæhler about three miles from the village of Kutztown, who intends to have ready accommodations for visitors and explorers during this April.—H. W. Hollenbush. Reading, Pennsylvania.

MICROSCOPY.

AN IMPROVED MODE OF OBSERVING CAPILLARY CIRCULATION. As I have never seen in print the following method of exhibiting the circulation of the blood in the frog, I send it hoping that it may enable some one interested in such studies to demonstrate the distribution and influence of the nerves upon the capillary vessels and circulation. I have, for over twenty years, been aware of the peculiar manipulation presently to be described; where I first obtained the knowledge, or how, I cannot state. I have made the facts known to a great many microscopists, and have not, as yet, met any one who previously knew it. If we grasp a frog in the hand and plunge it in water about as warm as can be conveniently borne, say about 120°, though I have never measured this, judging simply from the apparent warmth to the hand, we shall find that, in a few moments, the frog will become perfectly rigid; it may now be removed and laid upon a plate for dissection. Carefully opening and stretching the parts by pulling upon the fore limbs gently, or even cutting the bones if necessary, the heart may be displayed, showing the contraction and expansion beautifully; and if now the animal is placed in warm water, the lungs will immediately float out, and by a suitably contrived stage, the circulation may be examined. It is better, however, not to do this but to draw out gently the large intestine by means of blunt forceps, and then spreading the mesentery on the glass of the frog plate (I find it convenient to use a large one with an elevated glass, instead of one in the same plane, on which to spread the mesentery) we can observe the capillary circulation very nicely with a 1/4 or 1/5 inch objective, by dropping a bit of thin glass over the place or with a higher power "immersion." Of course the parts opened must be kept moist and covered with a cloth, and a few drops of tepid water added from time to time. If the experiment has been properly conducted, the animal will remain perfectly quiet and the circulation will continue for hours; I cannot say how long, for I have never known it to cease until long after I had finished all the exhibition I have ever had occasion to make.